

Form PTO-1449 (REV. 7-89)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. UGR-100X	SERIAL NO. 09/629,596
INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT(S): Michael J. Adang, Laura M. Kasman	
		FILING DATE July 31, 2000	GROUP 1645

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PP	AO	Marzari, R., P. Edomi, R.K. Bhatjagar, S. Ahmad, A. Selvapandiyam, and A. Bradbury (1997) "Phage display of <i>Bacillus thuringiensis</i> CryIA(a) toxin," <i>FEBS Letters</i> 411 :27-31.
	AP	Schwartz, J.-L., Y.J. Lu, P. Soehnlein, R. Brousseau, L. Masson, R. Laprade, and M. J. Adang (1997) "Ion channels formed in planar lipid bilayers by <i>Bacillus thuringiensis</i> toxins in the presence of <i>Manduca sexta</i> midgut receptors," <i>FEBS Lett.</i> 412 :270-276.
	AQ	Dean, D. H., F. Rajamohan, M. K. Lee, S. J. Wu, X. J. Chen, E. Alcantara, and S. R. Hussain (1996) "Probing the mechanism of action of <i>Bacillus thuringiensis</i> insecticidal proteins by site-directed mutagenesis - A minireview," <i>Gene</i> 179 :111-117.
	AR	Hogrefe, H.H., J.R. Amberg, B.N. Hay, J.A. Sorge, and B. Shopes (1993) "Cloning in a bacteriophage lambda vector for the display of binding proteins on filamentous phage," <i>Gene</i> 137 :85-91.
	AS	Smith, G.P. and D. J. Ellar (1994) "Mutagenesis of two surface exposed loops of the <i>Bacillus thuringiensis</i> CryIC d-endotoxin affects insecticidal specificity," <i>Biochem. J.</i> 302 :611-616.
	AT	Wabiko, H. and Yasuda, E. (1995) " <i>Bacillus thuringiensis</i> protoxin location of toxic border and requirement of non-toxic domain for high level <i>in vivo</i> production of active toxin," <i>Microbiology</i> 141 :629-639.

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PP	AO	Crickmore, N., D.R. Zeigler, J. Feitelson, E. Schnepf, J. Van Rie, D. Lereclus, J. Baum, and D.H. Dean (1998) "Revision of the nomenclature of the <i>Bacillus thuringiensis</i> pesticidal crystal proteins," <i>Microbiology and Molecular Biology Reviews</i> 62:807-813.
	AP	Estruch J J, Carozzi N B, Desai N, Duck N B, Warren G W, Koziel M G. (1997) "Transgenic plants An emerging approach to pest control," <i>Nature Biotechnology</i> 15:137-141.
	AQ	Chen, X.J., M.K. Lee, and D.H. Dean (1993) "Site-directed mutations in a highly conserved region of <i>Bacillus thuringiensis</i> d-endotoxin affect inhibitions of short circuit current across <i>Bombyx mori</i> midguts.," <i>Proc. Natl. Acad. Sci. USA</i> 90:9041-9045.
	AR	Stemmer, W.P.C. (1994b) "DNA shuffling by random fragmentation and reassembly: <i>In vitro</i> recombination for molecular evolution," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 91:10747-10751.
	AS	Rajamohan, F., J.A. Cottrill, F. Gould, and D.H. Dean (1996) "Role of domain II, loop 2 residues of <i>Bacillus thuringiensis</i> Cry1Ab d-endotoxin in reversable and irreversable binding to <i>Manduca sexta</i> and <i>Heliothis virescens</i> ," <i>J. Biol. Chem.</i> 271:2390-2396.
	AT	Masson, L., Y.-J. Lu, A. Mazza, R. Brosseau, and M.J. Adang (1995) "The Cry1A(c) receptor purified from <i>Manduca sexta</i> displays multiple specificities," <i>J. Biol. Chem.</i> 270:20309-20315.

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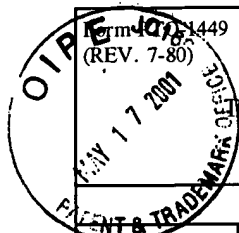
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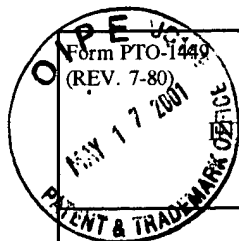
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PP	AO	Sangadala, S., F.S. Walters, L. H. English, and M.J. Adang (1994) "A mixture of <i>Manduca sexta</i> aminopeptidase and phosphatase enhances <i>Bacillus thuringiensis</i> insecticidal Cry1A(c) toxin binding and ⁸⁶ Rb/K ⁺ efflux <i>in vitro</i> ," <i>J. Biol. Chem.</i> 269 :10088-10092.
	AP	Knowles, B.H. and J.A.T. Dow (1993) "The crystal delta-endotoxins of <i>Bacillus thuringiensis</i> - models for their mechanism of action on the insect gut," <i>Bioassays</i> 15 :469-476.
	AQ	Lee, M.K., B.A. Young and D.H. Dean (1995) "Domain III exchanges of <i>Bacillus thuringiensis</i> Cry1A toxins affect binding to different gypsy moth midgut receptors," <i>Biochem. Biophys. Res. Comm.</i> 216 :306-312.
	AR	Bosch, D., B. Schipper, H. Van Der Kleij, R.A. De Maagd, and W.J. Steikema (1994) "Recombinant <i>Bacillus thuringiensis</i> crystal proteins with new properties Possibilities for resistance management," <i>Biotechnology</i> 12 :915-918.
	AS	Feitelson, J.S., J. Payne, and L. Kim (1992) " <i>Bacillus thuringiensis</i> Insects and beyond," <i>Biotechnology</i> 10 :271-275.
	AT	Parmley, S.F. and Smith, G.P. (1988) "Antibody-selectable filamentous phage vectors affinity purification of target genes," <i>Gene</i> 73 :305-318.

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pl	AO	Hofte, H., S. Buysens, M. Vaeck, and J. Leemans (1988) "Fusion proteins with both insecticidal and neomycin phosphotransferase II activity," <i>FEBS Lett.</i> 226 :364-370.
1	AP	Bullock <i>et al.</i> , (1987) "XL1-Blue: A high efficiency plasmid transforming <i>recA</i> <i>Escherichia coli</i> strain with Beta-Galactosidase selection," <i>BioTechniques</i> 5 (4), 376-379.
	AQ	Wolfersberger, M.G., Luthy, P., Maurer, A., Parenti, P., Sacchi, V.F., Giordana, B., and Hanozet, G.M. (1987) "Preparation and partial characterization of amino acid transporting brush border membrane vesicles from the larval midgut of the cabbage butterfly (<i>Pieris brassicae</i>)," <i>Comp. Biochem. Physiol.</i> 86A : 301-308.
	AR	Messing <i>et al.</i> , (1981) "A system for shotgun DNA sequencing," <i>Nucleic Acids Res.</i> , 9 :309-321.
	AS	Zoller <i>et al.</i> , (1982) "Oligonucleotide-directed mutagenesis using M13-derived vectors: an efficient and general procedure for the production of point mutations in any fragment of DNA," <i>Nucleic Acids Res.</i> 10 :6487-6504.
✓	AT	Hofmann, C., H. Vanderbruggen, H. Hofte, J. Van Rie, S. Jansens, and H. Van Mellaert. (1988) "Specificity of <i>Bacillus thuringiensis</i> d-endotoxins is correlated with the presence of high affinity binding sites in the brush border membrane of target insect midguts," <i>Proc. Natl. Acad. Sci. USA</i> 85 :7844-7848.

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AO	Keohavong, P., and Thilly, W.G. (1989) "Fidelity of DNA polymerases in DNA amplification," <i>Proc. Natl. Acad. Sci. U.S.A.</i> 86 :9253-9257.
AP	Ge, A.Z. <i>et al.</i> (1989) "Location of the <i>Bombyx mori</i> specificity domain on a <i>Bacillus thuringiensis</i> Delta-endotoxin protein," <i>Proc. Natl. Acad. Sci. USA</i> 86 :4037-4041.
AQ	Crea <i>et al.</i> (1978) "Chemical synthesis of genes for human insulin," <i>Proc. Nat'l. Acad. Sci. USA</i> 75 :5765-5769.
AR	English, L. and Readdy, T.L. (1989) "Delta endotoxin inhibits a phosphatase in midgut epithelial membranes of <i>Heliothis virescens</i> ," <i>Insect Biochem.</i> 19 :145-152.
AS	Hunter, W. and Greenwood, F. (1962) "Preparation of iodine-131 labeled human growth hormone of high specific activity," <i>Nature</i> 194 :495-496.
AT	Cadwell, R., and Joyce, G. (1994) "Mutagenic PCR," <i>PCR Methods/Appl.</i> 32 :S136-S140.

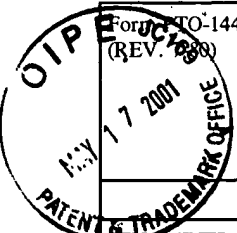
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PP	AO	Cadwell, R., and Joyce, G.F. (1992) "Randomization of genes by PCR mutagenesis," <i>PCR Methods Appl.</i> 2:28-33.
	AP	Li, J., Carroll, J., and Ellar, D.J. (1991) "Crystal structure of insecticidal d-endotoxin from <i>Bacillus thuringiensis</i> at 2.5 Å resolution," <i>Nature</i> 353:815-821.
	AQ	Knight, P.J., N. Crickmore, and D.J. Ellar (1994) "The receptor for <i>Bacillus thuringiensis</i> CryIA(c) delta-endotoxin in the brush border membrane of the lepidopteran <i>Manduca sexta</i> is aminopeptidase N," <i>Molec. Microbiol.</i> 11:429-436.
	AR	Stemmer, W.P.C. (1994a) "Rapid evolution of a protein <i>in vitro</i> by DNA shuffling," <i>Nature (London)</i> 370:389-391.
	AS	Lambert, B. and Peferoen, M. (1992) "Insecticidal promise of <i>Bacillus thuringiensis</i> ," <i>Bioscience</i> 42:112-122.
✓	AT	Stewart, C.N., M.J. Adang, J.N. All, H.R. Boerma, G. Cardineau, D. Tucker, and W.A. Parrott (1996) "Genetic transformation, recovery, and characterization of fertile soybean transgenic for a synthetic <i>Bacillus thuringiensis</i> cryIAc gene," <i>Plant Physiol.</i> 112:121-129.

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PP	AO	Saiki, R.K., Gelfand, D.H., Stoffel, S., Scharf, S.J., Higuchi, R., Horn, G.T., Mullis, K.B., and Erlich, H.A. (1988) "Primer-directed enzymatic amplification of DNA with a thermostable DNA polymerase," <i>Science</i> 239 :487-491.
	AP	Scott, J. K. and Smith, G. P. (1990) "Searching for peptide ligands with an epitope library," <i>Science</i> 249 :386-390.
	AQ	Bartel, D., and Szostak, J. (1993) "Isolation of new ribozymes from a large pool of random sequences," <i>Science</i> 261 :1411-1418.
	AR	De Maagd, R. A. , H. van der Kleij, P. Bakker, W.J. Stiekema, and D. Bosch (1996) "Different domains of <i>Bacillus thuringiensis</i> d-endotoxins can bind to insect midgut membrane proteins on ligand blots," <i>App. Environ. Microbiol.</i> 62 :2753-2757.
	AS	Garczynski, S.F., Crim, J.W., and Adang, M.J. (1991) "Identification of putative insect brush border membrane-binding molecules specific to <i>Bacillus thuringiensis</i> d-endotoxin by protein blot analysis," <i>Appl. Environ. Microbiol.</i> 57 :2816-2820.
✓	AT	Lee, M.K., F. Rajamohan, F. Gould, and D.H. Dean (1995) "Resistance to <i>Bacillus thuringiensis</i> Cry1A d-endotoxins in a laboratory-selected <i>Heliothis virescens</i> strain is related to receptor alteration," <i>Appl. Environ. Microbiol.</i> 61 :3836-3842.

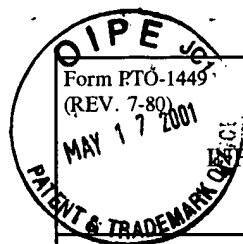
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PP	AO	Tabashnik, B.E., T. Malvar, Y.-B. Liu, N. Finson, D. Boethakur, B.S. Shin, S.-H. Park, L. Masson, R. DeMaagd, and D. Bosch (1996) "Cross-resistance of diamondback moth implies altered interactions with Domain II of <i>Bacillus thuringiensis</i> toxins," <i>Appl. Environ. Microbiol.</i> 62 :2839-2844.
	AP	Van Rie, J., S. Jansens, H. Hofte, D. Degheele, and H. Van Melleart (1990) "Receptors on the brush border membrane of the insect midgut as determinants of the specificity of <i>B. thuringiensis</i> delta-endotoxins," <i>Appl. Environ. Microbiol.</i> 56 :1378-1385.
	AQ	Wolfersberger, M.G., X.J. Chen, and D.H. Dean (1996) "Site-directed mutations on the third domain of <i>Bacillus thuringiensis</i> d-endotoxin CryIAa affect its ability to increase the permeability of <i>Bombyx mori</i> midgut brush border membrane vesicles," <i>Appl. Environ. Microbiol.</i> 62 :279-282.
	AR	Grochulski, Pawel, Luke Masson, Svetlana Borisova, Marianne Pusztai-Carey, Jean-Louis Schwartz, Roland Brousseau, and Mirosław Cygler (1995) " <i>Bacillus thuringiensis</i> CryIA(a) Insecticidal Toxin: Crystal Structure and Channel Formation," <i>J. Mol. Biol.</i> 254 :447-464.
	AS	Smith, George P. (1988) "Filamentous Phage Assembly: Morphogenetically Defective Mutants That Do Not Kill The Host," <i>Virology</i> 167 :156-165.
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